

What we claims is:

1. Fibers melt-spun from a thermoplastic alternating copolymer composed of alkenes and carbon monoxide having a

- tenacity BT > 900 mN/tex,
- 5 - melting point  $T_m > 220^{\circ}\text{C}$ ,
- crystallinity  $V_c > 33\%$ , and
- birefringence  $\Delta n > 0.0550$ .

2. Fibers melt-spun from a thermoplastic alternating copolymer composed of alkenes and carbon monoxide having a

- 10 - tenacity BT > 1000 mN/tex,
- melting point  $T_m > 220^{\circ}\text{C}$ ,
- crystallinity  $V_c > 35\%$ , and
- birefringence  $\Delta n > 0.0570$ .

3. Fibers melt-spun from a thermoplastic alternating copolymer composed of ethylene/propylene and carbon monoxide and with a propylene content between 4 and 0.5 mole%, calculated on ethylene, having a

- 15 - tenacity BT > 1000 mN/tex,
- melting point  $T_m > 240^{\circ}\text{C}$ ,
- crystallinity  $V_c > 40\%$ , and
- 20 - birefringence  $\Delta n > 0.0570$ .

4. A process for preparing fibers from a thermoplastic alternating copolymer composed of alkenes and carbon monoxide, in which the process comprises melt-spinning the copolymer and subsequently drawing the resulting fibers, wherein the melt-spinning process is conducted with a polymer melt free  
25 of crystallization nuclei at a temperature of at most 40K above the melting temperature of the polymer  $T_m$  (in K) and the drawing of the fibers is conducted at a temperature in the range of  $T_{mc} - 15\text{K}$  to  $T_{mc} - 90\text{K}$ , with  $T_{mc}$  representing the constrained melting temperature, at a draw ratio in the range of 5 to 12 and a drawing tension corrected for temperature  $DT_{d,corr}$  in the range of 105 to 300  
30 mN/tex,

$$DT_{d,corr.} = \frac{F_{DR} \cdot DR}{tex \left[ e^{(1000/T_d)} - e^{(1000/T_m)} \right]^{0.8}}$$

wherein  $F_{DR}$  represents the force measured at a draw ratio DR (in mN) and  $T_d$  represents the drawing temperature (in K), the calculation of the drawing tension corrected for temperature including a linear density of the fibers prior to starting of the drawing.

5        5.        A process according to claim 4, wherein the draw ratio is at least 7 and the drawing tension corrected for temperature is in the range of 120 to 280 mN/tex.

10        6.        A process according to claim 4, wherein the fibers obtained following the process have a tenacity (in mN/tex) in the range of  $313\ln(DT_{d,corr.}) - 575$  to  $313\ln(DT_{d,corr.}) - 755$ .

15        7.        A process according to claim 4, wherein the drawing tension corrected for temperature  $DT_{d,corr.}$  is more than 140 mN/tex, and wherein the fibers obtained following the process have a tenacity of more than about 900 mN/tex.

8.        A process according to claim 4, wherein the alternating copolymer contains ethylene.

9.        A process according to claim 8, wherein in the alternating copolymer, 80 to 100% of the alkene units are composed of ethylene.

20        10.       A process according to claim 4, wherein the alternating copolymer is composed of ethylene/propylene and carbon monoxide and with a propylene content between 4 and 0.5 mole %, calculated on ethylene.

11.       A rubber article containing the fibers according to claim 1.

12.       A tire containing the fibers according to claim 1.

25        13.       The tire according to claim 12, wherein the tire is a car tire.

14.       A tire containing the fibers made according to the process of claim

4.

15.       A rubber article containing the fibers made according to the process of claim 4.